REMARKS

This is in response to the Office Action dated December 14, 2006.

Claims 1-9 and 25-39 were pending as of the date of the Office Action. Claims 1, 6, 25, 30, 34 and 37 have been canceled herein. Claims 2, 3, 5, 7-9, 26-29, 31-33, 35, 38 and 39 have been amended herein. Claims 4 and 36 are unchanged. Claims 40-45 are new.

I.   Interview Summary

The undersigned wishes to thank Examiner Ehichioya for granting the telephonic interview conducted May 10, 2007. During the interview, the amendments proposed above were provided to the Examiner, and the undersigned presented the arguments for patentability set forth below in Section III. Although no agreement was reached during the interview, the Examiner indicated that he would consider the amendments and arguments presented. In addition, at the suggestion of the Examiner, the claims reciting a "computer-readable medium" have all been amended to recite a "computer readable storage medium."

II.   The Claims Comply With 35 U.S.C. § 112, ¶ 2

Claims 1 and 25 stand rejected under 35 U.S.C. § 112, ¶ 2 on the ground that the phrase "without altering the assigned data type of said at least one designated field" and the related phrase "irrespective of the assigned data type of that field" are negative limitations. As discussed more fully below in Section III of this response, the applicants have incorporated the recitations of claim 1 into claims 5 and 7 and have incorporated the recitations of claim 25 into claims 29 and 31 to rewrite those claims in independent form. In each of the now independent claims 5, 7, 29 and 31, the applicants have amended the first phrase to now recite "*while maintaining* the assigned data type of said at least one designated field." Thus, that feature is now recited positively in the claim, *i.e.*, it does not constitute a negative limitation, and should be given patentable weight. The second phrase, "irrespective of the assigned data type of that field" has been deleted. The applicants respectfully submit that with these amendments, independent claims 5, 7, 29 and 31 fully comply with the requirements of Section 112. Reconsideration of the Section 112 rejection is respectfully requested.

II.   Independent Claims 5, 7, 29 and 31 Recite Features That Distinguish Over The Cited Art Of Record

Claims 1-7, 9, 25-31 and 33-39 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,799,310 ("Anderson"). Claims 8 and 32 stand rejected under 35 U.S.C. § 103(a) as being obvious over Anderson in view of U.S. Patent No. 6,070,174 (Starek). Reconsideration is respectfully requested in view of the claim amendments presented above and the following remarks.

A.   Now Independent Claims 5 and 29 and New Dependent Claims 40-45

Claims 5 and 29 have been rewritten in independent form, including all of the limitations of their base claim and any intervening claims. The applicants respectfully submit that claims 5 and 29, as well as their respective new dependent claims 40-42 and 43-45, recite features that are not taught by Anderson.

Specifically, in addition to reciting that "at least one of said plurality of fields of [a user defined type is] designated as containing data that is to be stored as a file outside of [a] database store separately from the data of the other of said plurality of fields of the type," claims 5 and 29 further recite the steps of:

> creating a unique *dedicated* directory within a file system of the computer system for storing files containing the data of said at least one designated field of instances of the user defined type;

and

> for each ... request to store an object that is an instance of the user defined type:
>
> ...
>
> storing the data of said at least one designated field of the instance of the user defined type as a respective file within the created directory....

See, e.g., claim 5 (emphasis added). That is, for each instance of the user defined type that is stored, the data in the designated field of that instance is stored as a file in a file system directory that is dedicated for storing such files. Claims 40 -42, which depend from claim 5, and similar claims 43 -45 which depend from claim 29, have been added to further recite the concept illustrated in Figure 7 and described in Paragraph 0064 of the specification in which the physical organization of files is optimized based on the logical structure and operations of the database store. Specifically, as illustrated in Figure 7, the location (*i.e.,* path) of a given unique dedicated directory within the file system is associated with a particular database table

or column within a table and is only used to store files containing the data of the designated field of instances of the user defined type that are stored in that table or column. Storing the files in such table-level and column-level directories enables more efficient backing up of a database, table or column because the files are not scattered around the file system.

Anderson does not teach or suggest grouping such files under system created directories as claimed. The portion of Anderson that is alleged in the Office Action to teach this feature states:

> If the parameter is absent, storage will be to a system wide
> default destination, either to a hidden table, or a directory path
> on an external server.

Anderson, col. 26, ll. 22-25. This section is describing a "constructor function that creates new instances of MM Objects" and merely states that if a {Dest} parameter is "absent," then storage will be to a default "directory path on an external server." It does not teach creating a unique, dedicated directory to which only files containing the data of a designated field of certain instances of the user defined type are stored, as recited in claims 5 and 29. Nor does it teach the concept of organizing the files within directories of the file system based on the logical structure of the database store as recited in new claims 40-45. Reconsideration of the Section 102(b) rejection of these claims is therefore respectfully requested.

B.   Now Independent Claims 7 and 31

Claims 7 and 31 have also been rewritten in independent form, including all of the limitations of their base claims and any intervening claims. In addition to reciting that "at least one of said plurality of fields of [a user defined type is] designated as containing data that is to be stored as a file outside of [a] database store separately from the data of the other of said plurality of fields of the type," claims 7 and 31 further recite the steps that are performed when an application requests access, via the file system of a computer, to the file in which the data of a designated field of a user-defined type is stored outside the database store. In particular, while access is made via the file system, these claims recite that the request for access to the file identifies the file *not* by its identity within the file system, but by identifying "the field of the object [for which the file holds data] ... within the *database store*," and then "determining from the identity of the field of the object within the database

store a path within the file system of the computer to the file containing the data of that field

of the object." *See, e.g.,* claim 7. As explained in the specification,

> applications are also able to access such files directly via the file system of the
> computer. Specifically, an application can generate a call, via the application
> programming interface to the file system, to open such a file directly. The call
> will identify the corresponding Filestream field of the object by its identity
> within the database store. Based on the identity of the field of the object
> within the database store, a file system path to the file containing the data of
> that field is determined. The call to open the file is then executed using the
> determined path.

Spec., ¶ 0068.

Anderson does not teach giving an object ID-based path to an application. Anderson

teaches giving the actual file system path to the application. The applicants respectfully

submit that the cited portions of Anderson (col. 13, ll. 64-67 and col. 29, ln. 47 – col. 30, ln.

5) that are alleged teach this feature do not do so. Reconsideration of the Section 102(b)

rejection of these claims is also respectfully requested.

Inasmuch as the remaining claims now depend, either directly or indirectly, from one

of independent claims 5, 7, 29 or 31, the applicants submit that they too are patentable over

the cited art of record for the same reasons.

CONCLUSION

For the foregoing reasons, Applicants respectfully submit that the instant application

is in condition for allowance.

Respectfully submitted,

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